INDEX TO VOLUME XLIII

All new names are printed in *italics*.

Ablerus *palauensis*, 504.
Acarina, 492.
Acrididae, 173.
Acroricnus, 249.
  stylator, 251.
  stylator, 253.
  niger, 253.
  excelsus, 255.
  townesi, 256.
  junceus, 257.
  aequatus, 258.
  axilaris, 259.
  edwardsii, 259.
 cubensis, 260.
 tricolor, 260.
Aedes, 123.
 aegypti, 555.
 hebrideus, 123.
 pernotatus, 123.
 sticticus, 262.
 vexans, 262.
Aiceona osugii, 591.
Aleurodaphis blumeae, 602.
Alexander, Charles P., article by, 418.
Anabrolepis *oceanica*, 501.
Andrenosoma
 cruenta, 233.
 fulvicauda, 233.
Aphididae, 587.
Aphis
 gossypii, 595.
 malvoides, 595.
 glycines, 595.
 laburni, 595.
 nerii, 596.
 saliceti, 596.
 odinae, 596.
 sachari, 596.
 bambusae, 596.
 pahanensis, 596.
Aphoebantus, 15.
 abnormis, 21.
 altercinctus, 21
 arenicola, 22.
 balteatus, 23.
 bisulcus, 23.
 borealis, 24.
 brevistylus, 24.
 catenarius, 24.
 contiguus, 25.
  separatus, 25.
 conurus, 26.
 cyclops, 26.
 denudatus, 27.
 desertus, 27.
 eremicola, 28.
 fumosus, 29.
 gluteatus, 29.
 halteratus, 30.
 hians, 30.
 hirsutus, 31.
 interruptus, 31.
 inversus, 32.
 leviculus, 32.
 maculatus, 33.
 marcidus, 33.
 marginatus, 34.
 micropyga, 34.
 mixtus, 35.
 mormon, 35.
 mus, 36.
  barbatus, 36.
 obtectus, 36.
 parkeri, 37.
 pellucidus, 38.
 peodes, 38.
 rattus, 39.
 scalaris, 39.
 scriptus, 40.
 sperryorum, 40.
 tardus, 41.
 timberlakei, 42.
 transitus, 42.
 ursula, 42.
 varius, 43.
 vasatus, 44.
 vittatus, 44.
 vulpecula, 45.
Apidae, 152, 361.
Apis mellifera, 152, 361.
Archilimnophila *subunicoides*, 428.
Asilidae, 227.
Asilinae, 234.
Asilus
 blantoni, 238.
 erythrocnemius, 238.
 floridensis, 238.
 frosti, 238.
 gracilis, 239.
 lecythus, 239.
 notatus, 239.
 maneei, 239.
 novae-scotiae, 239.
 snowi, 239.
Astegapteryx fransseni *kepongensis*, 606.
Atomosia
 puella, 233.
 rufipes, 233.
 sayii, 233.

Beatis *hiemalis*, 155.
Balduf, W. V., article by, 354.
Batchelor, G. S., article by, 492.
Beck, S. D., article by, 305.
Berg, Clifford O., article by, 274.
Betten, Cornelius, article by, 508.
Bilstad, N. M., article by, 305.
Bohart, Richard, article by, 399.

Bombomima
cinerea, 234.
flavicollis, 234.
floridensis, 234.
grossa, 234.
lata, 234.
pulchella, 234.
thoracica, 234.
virginica, 234.
Bombyliidae, 1.
Book Notices, Authors:
Abbott, Mabel, 71.
Allee, W. C., 276.
Bates, Marston, 169.
Brown, F. A., 360.
Berner, Lewis, 342.
Chamberlin, W. J., 154.
Chauvin, Remy, 159.
Cochran, William G., 572.
Costa Lima, A. da, 494.
Cox, Gertrude M., 572.
Craighead, F. C., 239.
David, W. A. L., 171.
Demerec, M., 522.
Duncan, Winifred, 167.
Ebeling, Walker, 226.
Ehnbom, Kjell, 168.
Emerson, A. E., 276.
Farris, J. Edmond, 500.
Fattig, P. W., 171.
Gertsch, Willis J., 45.
Hatch, Melville H., 507.
Karpinsky, Jan Jerzy, 248.
Matheson, Robert, 398.
Metcalf, Robert L., 151.
Oman, Paul Wilson, 458.
Park, O., 276.
Park, T., 276.
Qadri, M. A. H., 74.
Rensch, Bernard, 459.
Schmidt, K. P., 276.
Seguy, E., 607.
Shvanvich, B. N., 333.
Snyder, Thomas E., 171.
Steinhaus, Edward A., 169.
Strawinski, Konstanty, 248.
Viette, Pierre E. L., 136.

Book Notices and Announcements, Titles:
Air Transport and Insects of Agricultural Importance, by W. A. L. David, 171.
American Spiders, by Willis J. Gertsch, 45.
Arquivos de Zoologia do Estado de Sao Paulo, Vol. 5, 168.
Biologica, 188.
La Biologie des Dipteres, by E. Seguy, 607.
The Biology of Drosophila, by M. Demerec, 522.
The Care and Breeding of Laboratory Animals, by Edmond J. Farris, 500.
The Carabidae or Ground Beetles of Georgia, by P. W. Fattig, 171.
Catalogue of the Heterocerous Lepidoptera from French Oceania, by Pierre E. L. Viette, 136.
Catalog of the Termites (Isoptera) of the World, by Thomas E. Snyder, 171.
Collecting in National Parks, 172.
Experimental Designs, by William G. Cochran and Gertrude M. Cox, 572.
Erratum, 580.
On Indian Insect Types. I. External and Internal Anatomy of the Buffalo-Louse Haematopinus tuberculatus Burmeister, by M. A. H. Qadri, 74.
Insects Affecting Forest Products and Other Materials, by W. J. Chamberlin, 154.
Insect Enemies of Eastern Forests, by F. C. Craighead, 239.
Insectes do Brasil, Vol. VI, Lepidopteros, Part 2, by A. da Costa Lima, 494.
Korniki ziem Polski (Les Bostryches de la Pologne), by Jan Jerzy Karpinski and Konstanty Strawinski, 248.
Kurs Obshchei Entomologii, by B. N. Shvanvich, 333.
The Larvaevoridae (Tachinadae) of Georgia, by P. W. Fattig, 171.
The Lepidopterists' Society, 554.
The Life of William T. Davis, by Mabel Abbott, 71.
The Mayflies of Florida, by Lewis Berner, 342.
Medical Entomology, by Robert Matheson, 398.
The Mode of Action of Organic Insecticides, by Robert L. Metcalf, 151.
The Natural History of Mosquitoes, by Marston Bates, 169.
Nearctic Leafhoppers (Homoptera: Cicadellidae) A Generic Classification and Check List, by Paul Wilson Oman, 458.
Neuere Probleme der Abstammungslehre, by Bernard Rensch, 459.
Notes on Some Japanese Entomological Publications, 277.
Physiologie de l'Insects, by Remy Chauvin, 159.
Principles of Animal Ecology, by W. C. Allee, A. E. Emerson, O. Park, T. Park, and K. P. Schmidt, 276.
Principles of Insect Pathology, by Edward A. Steinhaus, 169.
Selected Invertebrate Types, by F. A. Brown, 360.

Summary Tables of Biological Tests, Vol. 1, Nos. 1 and 2, 114.
The Society of Systematic Zoology, 310.
Studies on the Central and Sympathetic Nervous System and Some Sense Organs in the Head of Neuropteroid Insects, by Kjell Ehnbom, 168.
Studies Honoring Trevor Kincaid, by Melville Hatch, 507.
Subtropical Entomology, by Walker Ebeling, 226.
The Wasman Journal of Biology, 373.
Webs in the Wind, by Winifred Duncan, 167.

Brachysiphoniella graminis, 595.
Braconidae, 334.
Breakey, E. P., article by, 492.
Bromley, S. W., article by, 227.
Brontispa yoshinoi, 311.

Cerambycidae, 608.
Cerataphis
freycinetiae, 602.
lataniae, 602.
Cerotainia macrocera, 233.
Ceratovacuna lanigera, 602.
Ceratoglyphina bambusae, 602.
Ceraturgus nigripes, 231.
Ceraturgopsis cornutus, 231.
Cervaphis cambodiensis, 587.
Coccidae, 501.
Cole, A. C., article by, 499.
Coleoptera, 311, 495, 608.
Culicidae, 75, 123, 262, 399, 555.
Cyrtopogon falto, 231.
Culex, 75.
abominator, 86.
aikenii, 86.
albinensis, 86.
alcocci, 86.
alogistus, 87.
amitis, 87.
andricus, 87.
anips, 87.
atratus, 87.
bastagarius, 87.
batesi, 88.
bequaerti, 88.
breviculus, 88.
carcinophilus, 88.
cauchensis, 88.
caudelli, 88.
chrysonotum, 88.
chrysothorax, 98.
comatus, 88.
commevynensis, 89.
comminutor, 89.
conspirator, 89.
coppenamensis, 89.
corentynensis, 89.
crybda, 89.
decorator, 98.
distinguendus, 89.
dunni, 89.
dyius, 90.
eastor, 90.
educator, 90.
egcymon, 90.
elephas, 90.
elevator, 91.
epirus, 98.
equinoxialis, 91.
erraticus, 91.
evansae, 91.
fasciolatus, 98.
flabellifer, 91.
gravitator, 98.
hesitator, 91.
humilis, 98.
idottus, 91.
implicatus, 91.
inadmirabilis, 91.
indecorabilis, 98.
inhibitator, 91.
innovator, 92.
intricatus, 92.
iolambdis, 92.
jubifer, 92.
latisquama, 92.
limacifer, 92.
lucifugus, 92.
lugens, 98.
luteopleurus, 98.
madininensis, 92.
maroniensis, 92.
maxinocca, 92.
menytes, 93.
mulrennani, 93.
mutator, 93.
nicceriensis, 93.
nigrescens, 93.
nigricorpus, 98.
nigrimaculata, 93.
ocellatus, 94.
oedipus, 94.
opisthopus, 94.
paracrybda, 94.
peccator, 94.
phlabistus, 94.
phlogistus, 94.
pilosus, 94.
plectoporpe, 95.
portesi, 95.
psatharus, 95.
punctiscapularis, 95.
putumayensis, 95.
quadrifoliatus, 96.
rabanicolus, 96.
rooti, 96.
rorotaensis, 96.
saramaccensis, 96.
serratimarge, 96.
simulator, 98.
sp., 93.
spissipes, 96.

Culex—(*Continued*)
surukumensis, 96.
sursumptor, 96.
taeniopus, 96.
tecmarsis, 97.
terebor, 97.
theobaldi, 97.
thomasi, 97.
tournieri, 97.
trifidus, 97.
unicornis, 97.
vexillifer, 97.
vomerifer, 97.
ybarmis, 97.
zeteki, 98.

Dactynotus
cameronensis, 593.
compositae, 594.
Dalmet, Herbert T., articles by, 137, 537.
Dasypogoninae, 231.
Dasypogoninae, 231.
Dicranostomus, 546.
Dicranota *profunda*, 425.
Dioctria
albius, 231.
brevis, 231.
seminole, 231.
Diogmites
crudelis, 232.
esuriens, 232.
misellus, 232.
neoternatus, 232.
platypterus, 233.
properans, 233.
salutans, 233.
Diptera, 1, 75, 115, 123, 137, 227, 240, 262, 343, 374, 399, 405, 418, 444, 523, 537, 555.
Doutt, Richard L., articles by, 311, 501.
Dizonias tristis, 231.

Eads, Richard B., article by, 46.
Elateridae, 495.
Epacmus, 5.
cirratus, 6.
clunalis, 8.
connectans, 10.
labiosus, 11.
litus, 11.
modestus, 11.
morsicans, 11.
nebritus, 12.
ponderosus, 14.
pulvereus, 13.
tomentosus, 14.
Ephemeroptera, 155.
Ephydridae, 374.
Eriophyidae, 492.
Erax
aestuans, 237.
apicalis, 237.
barbatus, 237.
femoratus, 237.
interruptus, 237.
rufibarbis, 237.
slossonae, 237.
stylatus, 238.
tabescens, 238.
Eucessia rubens, 15.
Eutrichosiphum lithocarpi *malayense*, 589.
Evans, F. C., article by, 320.

Fairchild, G. B., article by, 405.
Fisk, Frank W., article by, 555.
Formicidae, 189, 437, 461, 499.
Freeman, R. B., article by, 320.
Furcaspis oceanica, 501.

Gjullin, C. M., article by, 262.
Glyphinaphis bambusae, 602.
Gnophomyia *acheron*, 433.
Greenidea
anonae, 587.
ficicola, 588.
hirsuta, 588.
Greenideoida
vandermeermohri, 590.
mesuae, 590.
Grosch, Daniel S., article by, 546.
Gurney, Ashley B., article by, 546.

Hagen, Kenneth S., article by, 311.
Haskins, Caryl P., article by, 461.
Haskins, Edna F., article by, 461.
Haydak, Mykola H., article by, 361.
Hemiptera, 354, 368.
Hertig, Marshall, article by, 523.
Heteropogon
senilis, 231.
rubrifasciatus, 231.
Hispidae, 311.
Hoff, Clayton C., article by, 534.
Holcocaphala
abdominalis, 231.
calva, 231.
Holopogon, guttula, 231.
Homoptera, 501, 587.
Hyalopterus, arundinis, 595.
Hybomitra
difficilis, 120.
hinei, 121.
Hydrellia
ascita, 391.
bergi, 387.
caliginosa, 392.
cruralis, 378.
luctuosa, 387.
pulla, 382.
Hydromyza confluens, 396.
Hymenoptera, 152, 189, 249, 334, 361, 437, 461, 499.

Ichneumonidae, 249.

James, Maurice T., article by, 343.
Judd, W. W., article by, 608.

Kearns, C. W., article by, 444.
Komp, William H., article by, 75.
Korda, Frances H., article by, 49.

Lachnus tropicalis, 592.
Lampria
  bicolor, 233.
  rubriventris, 233.
Laphria saffrana, 234.
Laphriinae, 233.
Laphystia
  litoralis, 231.
  ochreifrons, 232.
LaRivers, Ira, article by, 368.
Leonard, Justin W., article by, 155.
Lepidoptera, 305.
Leptogaster
  annulatus, 230.
  atridorsalis, 230.
  badius, 230.
  brevicornis, 230.
  floridensis, 230.
  obscuripennis, 230.
  pictipes, 230.
  tenuipes, 230.
Leptogastrinae, 249.
Leucotabanus annulatus, 121.
Lilly, J. H., article by, 305.
Limnocorinae, 368.
Limnophila
  clavaria, 429.
  dis, 430.
  pietatis, 431.
Lipsothrix *yamamotoana*, 433.

Macrosiphoniella
  sanborni, 592.
  yomogifoliae, 593.
Macrosiphum ibarae, 592.
Mallophora
  bomboides, 234.
  clausicella, 234.
  laphroides, 234.
  minuta, 235.
  nigra, 235.
  orcina, 235.
  rex, 235.
Megoura
  citricola, 594.
  simplocois, 594.
Melander, Axel Leonard, article by, 1.
Melanoconion, 75.
Metarrhizium, 495.
  anisopliae, 496.
  brunneum, 495.
Micromyzus nigrum, 594.
Mitchell, Robert T., article by, 249.
Moree, Ray, article by, 72.
Musca domestica, 444.
Muscidae, 444.
Myrmecia, 461.
Myrmica, 189.
  brevinodis, 189.
    brevispinosa, 198.
    discontinua, 201.
    kuschei, 197.
    sulcinodoides, 195.
  forcipata, 211.
  everesti, 223.
  margaritae, 219.
    inornata, 219.
    pulchella, 219.
  moravica, 213.
  myrmecoxena, 218.
  punctiventris, 215.
    pinetorum, 215.
  revasinii, 212.
  ritae, 219.
  formosae, 220.
    indica, 221.
    serica, 222.
  scabrinodis, 202.
    angulinodis, 204.
    ahngeri, 203.
    aloba, 204.
    eidmanni, 204.
    granulinodis, 205.
    kaszenkoi, 205.
    lacustris, 206.
    mexicana, 206.
    rolandi, 208.
      reticulata, 208.
    rugulosoides, 208.
      striata, 208.
    sancta, 208.
    saposhnikovi, 209.
      baikalensis, 209.
    stangea, 210.
    turcica, 210.
    ussuriensis, 211.
    vandeli, 211.
    wesmaeli, 211.
    wheeleri, 211.
Myrmecoxena, 218.
Myzus
  circumflexum, 594.
  sp., 594.

Naucoridae, 368.
Neoitamus flavofemoratus, 235.
Neophyllaphis podocarpi, 587.
Nicocles
  pictus, 233.
  politus, 233.
Nippolachnus pyri, 592.
Notiphila loewi, 393.

Obituary Notices:
  Annand, Percy, 460.
  Barber, Herbert Spencer, 612.
  Howard, Leland Ossian, 610.
Ommatius
  tibialis, 238.
  gemma, 238.
Orchopeas howardii *texensis*, 46.
Oregma
  bambusae, 597.
  gambokana, 598.

nicolaiae, 599.
pendleburyi, 597.
sundanica, 599.
Ormosia *weymarni*, 434.
O'Rourke, Fergus J., article by, 437.
Orthogonis stygia, 234.
Orthopodomyia, 399.
californica, 399.
Orthoptera, 173, 546.

Paradelphomyia
nimbicolor, 427.
chosenica, 427.
Paraphytoptus chrysanthemi, 492.
Paratrichosiphum roepkei, 587.
Pineus laevis, 607.
Pentalonia nigronervosa, 595.
Perry, William J., article by, 123.
Phillip, Cornelius B., articles by, 115, 240.
Phlebotomus, 405, 523.
atroclavatus, 417.
cayennensis, 415.
hispaniolae, 415.
jamaicensis, 414.
puertoricensis, 416.
viequesensis, 417.
christophei, 409.
cubensis, 414.
duppyorum, 412.
orestes, 410.
punctigeniculatus, 526.
shannoni, 523, 525.
undulatus, 527.
volcanensis, 528.
Pogonosoma melanoptera, 233.
Ponerinae, 461.
Pratt, John J., Jr., article by, 573.
Proctocanthus
brevipennis, 235.
fulviventris, 236.
gracilis, 236.
heros, 236.
longus, 236.
milbertii, 236.
nigriventris, 236.
rufus, 237.
Promachus
bastardi, 235.
fitchii, 235.
quadratus, 235.
rufipes, 235.
Promyrmecia, 461.
Psuedopogonata aldrichii, 353.
Pseudoscorpionada, 534.
Punctiventris, 215.
pinetorum, 217.
Psychodidae, 405, 523.
Pycnopsyche, 508.
aglona, 514.
circularis, 514.
divergens, 514.
flazata, 516.
gentilis, 516.
guttifer, 516.
indiana, 518.
lepida, 518.
limbata, 520.
luculenta, 520.
rossi, 520.
scabripennis, 521.
sonso, 521.
subfasciata, 522.
Pyralidae, 305.
Pyrausta nubilalis, 305.

Reduvidae, 354.
Rhopalosiphum maidis, 595.
Richards, A. Glenn, article by, 49.
Rockwood, L. P., article by, 495.
Rockstein, Morris, article by, 152.
Rozeboom, Lloyd E., article by, 75.
Scopeuma, 343.
crinitum, 351.
dasythrix, 349.
frigidum, 350.
furcatum, 352.
griseum, 347.
hiemale, 348.
impudicum, 350.
molle, 346.
orcasae, 351.
pallidum, 352.
reses, 352.
stercorarium, 346.
suillum, 352.
vittatum, 353.
Scopeumatidae, 343.
Setaphis viridis, 587.
Simuliidae, 137, 537.
Simulium
delatorrei, 137.
ethelae, 143.
nigricornis, 148.
Sinea diadema, 354.
Siphonaptera, 46, 320.
Sitobion avenae *graminis*, 593.
Slifer, Eleanor H., article by, 173.
Stage, H. H., article by, 262.
Stenopogon
floridensis, 232.
subulatus, 232.
Stichopogon
abdominalis, 232.
trifasciatus, 232.
Sternberg, James, article by, 499.

Tabanidae, 240, 115.
Tabanus, 240.
abditus, 117.
boharti, 115.
coarctatus, 244.
endymion, 244.
kesseli, 117.
kisliuki, 245.
melanocerus, 244.
moderator, 240.
molestus, 240.

mixis, 241.
nigripes, 243.
quirinus, 120.
sulcifrons, 243.
trimaculatus, 240.
turbidus, 244.
yulenus, 243.
Takahashi, R., article by, 587.
Taracticus octopunctatus, 233.
Tettigoniidae, 546.
Tetraneura sp., 607.
Tipulidae, 418.
Tipula
bicompressa, 424.
nigrolamina, 418.
conjuncta
conjuncta, 420.
conjunctoides, 420.
laterodentata, 421.
mediodentata, 422.
sublimatata *atrodeclivis*, 425.
Throcaphis
kayashimai, 602.
flavus, 603.
malaynus, 604.
gooti, 605.
Toxoptera
aurantii, 595.
citricida, 595.
Trachymyrmex, 499.
septentrionalis seminole, 299.
Trapido, Harold, article by, 405.
Trichoregma
flava, 600.
lutescens, 601.
malaccensis, 600.
muiri, 599.
musae, 599.
nipae, 599.
pallida, 601.
rhapidis, 600.
singaporensis, 600.
salatigensis, 601.
Tridenchthoniidae, 534.
Tridenchthonius
additilius, 535.
mexicanus, 534.
serrulatus, 534.
Trychoptera, 508.

Uropoda, 608.
Usingerina, 368.
moapensis, 368.
Usingerinini, 368.

Verrucaditha spinosa, 534.
Vivino, A. Earl, article by, 361.

Wadley, F. M., article by, 581.
Weber, Neal A., article by, 189.
Whitneyomyia beautifica *atricorpus*, 122

Yates, W. W., article by, 262.

MAILING DATES FOR 1950 ISSUE OF THE ANNALS

March Number—April 24, 1950.

June Number—August 8, 1950.

September Number—November 17, 1950.

December Number—January 20, 1951.